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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,910	09/14/2006	Nir Karasikov	7044-X06-025	1908
27317 7590 02/20/2008 FLEIT KAIN GIBBONS GUTMAN BONGINI & BIANCO 21355 EAST DIXIE HIGHWAY SUITE 115 MIAMI, FL 33180			EXAMINER BELLO, AGUSTIN	
			ART UNIT 2613	PAPER NUMBER
			MAIL DATE 02/20/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

TH

<b>Office Action Summary</b>	<b>Application No.</b> 10/598,910	<b>Applicant(s)</b> KARASIKOV ET AL.	
	<b>Examiner</b> Agustin Bello	<b>Art Unit</b> 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/16/07</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-8, 13, and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Sayyah (U.S. Patent No. 7,142,348).

Regarding claims 1 and 28, Sayyah teaches a data communication system comprising a transceiver unit (reference numeral 24a, 24b in Figure 5) for retromodulated optical communication with at least one of a plurality of retromodulator units (reference numeral 14 in Figure 4), the transceiver unit comprising at least one of a plurality of transceivers (reference numeral 24a, 24b in Figure 5), the transceivers transmitting diffused radiant energy at different angles covering a predetermined three- dimensional area (as seen in Figures 4 and 5), wherein each transceiver is enabled to set up and execute communication with at least one retromodulator unit located within its coverage area.

Regarding claim 2, Sayyah teaches the system of claim 1 where the coverage areas are contiguous (as seen in Figures 4 and 5).

Regarding claim 3, Sayyah teaches the system of claim 2 where the coverage areas overlap (as seen in Figures 4 and 5).

Regarding claim 4, Sayyah teaches the system of claim 1 wherein each transceiver is further enabled to maintain continuous communication with a retromodulator unit that moves between coverage areas (inherent in the airborne, satellite, and automobile embodiment of column 16 lines 15-29).

Regarding claim 5, Sayyah teaches the system of claim 1 further comprising at least one of a plurality of retromodulator units (reference numeral 14 in Figure 3d), where the retromodulator unit comprises multiple arrays of lenslets (reference numeral 205 in Figure 3e) connected to a common modulator (i.e. the AFP-MQW Modulators taken as a whole in Figure 3e) and reflector (column 6 lines 26-41).

Regarding claim 6, Sayyah teaches the system of claim 1 where the retromodulator unit comprises a spherical arrangement of lenslets (as seen in Figure 3C) connected to a common modulator and reflector.

Regarding claim 7, Sayyah teaches the system of claim 5 or claim 6 where the retromodulator unit is provided with an for communication with a data processing device interface (reference numeral 31 in Figure 1).

Regarding claim 8, Sayyah teaches the system of claim 1 further comprising at least one of a plurality of retromodulator units (reference numeral 14 in 4a), where the retromodulator unit comprises two or more parts (i.e. a retro-modulator for each wavelength as seen in Figure 4a), each part comprising a narrow band-pass optical filter (inherent in the reception of single wavelengths by each of the AFP-MQW modulators of Figure 4a) and a modulator (i.e. AFP-MQW modulators of Figure 4a), each part communicating with a separate segment of the transceiver unit (i.e. a different wavelength for each as shown in Figures 4, 4b).

Regarding claim 13, Sayyah teaches that the radiant energy is modulated at a high frequency (i.e. an optical frequency).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9-11, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sayyah in view of Chan (U.S. Patent No. 6,504,634).

Regarding claims 9, 29, and 30, Sayyah differs from the claimed invention in that Sayyah fails to specifically teach that the transceiver unit is configured to transmit low level radiation until detection of a retromodulator unit, whereupon the radiation level is increased in the transceiver covering the predetermined three-dimensional area in which the detected retromodulator unit is located. However, Chan teaches that this concept is well known in the art (column 31 lines 29-60). One skilled in the art would have been motivated to configure the transceiver unit to transmit low level radiation until detection of a retromodulator unit, whereupon the radiation level is increased in the transceiver covering the predetermined three-dimensional area in which the detected retromodulator unit is located in order to ensure that eye-safety requirements are always met (column 31 lines 29-30 of Chan). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to configure the transceiver unit to transmit low level radiation until detection of a retromodulator unit,

whereupon the radiation level is increased in the transceiver covering the predetermined three-dimensional area in which the detected retromodulator unit is located.

Regarding claim 10, both Sayyah (Figure 4) and Chan (Figures 24-26) teach that detection of the retromodulator unit is triggered by retroflected radiation from the retromodulator unit received by the transceiver unit.

Regarding claim 11, Sayyah (Figure 4) teaches that detection of the retromodulator unit is triggered by retromodulated radiation from the retromodulator unit received by the transceiver unit.

5. Claims 12 and 14-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sayyah.

Regarding claim 12, Sayyah differs from the claimed invention in that Sayyah fails to specifically teach that the radiant energy is transmitted and received via an optical fiber. However, Official Notice is given that transmission and reception of radiant energy via an optical fiber is well known in the art. One skilled in the art would have been motivated to transmit and receive the radiant energy via an optical fiber in order to reduce the likelihood of information loss due to transmission and reception of the radiant energy through free-space. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to transmit and receive the radiant energy via an optical fiber in Sayyah.

Regarding claims 14-27, Sayyah differs from the claimed invention in that Sayyah fails to specifically teach the various systems in which the retroreflector may be used or the systems with which the retroreflector may be integrated. However, one skilled in the art would clearly have recognized that it would have been possible to use the Sayyah's retroreflector system in any

of the systems claimed, or to integrate Sayyah's retroreflector with any of the systems claimed. One skilled in the art would have been motivated to do so in order to meet design requirements, budgetary requirements, or performance requirements. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include Sayyah's retroreflector system in any of the systems claimed, or to integrate Sayyah's retroreflector with any of the systems claimed.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to read "A. Bello". The signature is fluid and cursive, with a large initial "A" and a stylized "Bello".

Agustin Bello  
Primary Examiner  
Art Unit 2613